Author index for papers in Volume 43

Pages are numbered consecutively through the volume: 1–240, January/March; 241–448, May; 449–616, July; and 617–944, September/November.

Abadeer, W. W., A. Bagramian, D. W. Conkle, C. W. Griffin, E. Langlois, B. F. Lloyd, R. P. Mallette, J. E. Massucco, J. M. McKenna, S. W. Mittl, and P. H. Noel
407 *Key measurements of ultrathin gate dielectric reliability and in-line monitoring*

Abbott, P. H., D. G. Brush, C. W. Clark III, C. J. Crone, J. R. Ehrman, G. W. Ewart, C. A. Goodrich, M. Hack, J. S. Kapernick, B. J. Minchau, W. C. Shepard, R. M. Smith, Sr., R. Tallman, S. Walkowiak, A. Watanabe, and W. R. White
723 *Architecture and software support in IBM S/390 Parallel Enterprise Servers for IEEE Floating-Point arithmetic*

Alves, L. C.
875 see Mueller, M.

Anderson, R. E., and E. M. Foster
521 *Design of an MPEG-2 transport demultiplexor core*

Armacost, M., P. D. Hoh, R. Wise, W. Yan, J. J. Brown, J. H. Keller, G. A. Kaplita, S. D. Halle, K. P. Muller, M. D. Naeem, S. Srinivasan, H. Y. Ng, M. Gutsche, A. Gutmann, and B. Spuler
39 *Plasma-etching processes for ULSI semiconductor circuits*

Armbrust, D. S.
5 see Cote, D. R.

Athavale, S. D.
367 see Kotecki, D. E.

Averill, R. M., III, K. G. Barkley, M. A. Bowen, P. J. Camporese, A. H. Dansky, R. F. Hatch, D. E. Hoffman, M. D. Mayo, S. A. McCabe, T. G. McNamara, T. J. McPherson, G. A. Northrop, L. Sigal, H. H. Smith, D. A. Webber, and P. M. Williams
681 *Chip integration methodology for the IBM S/390 G5 and G6 custom microprocessors*

Bagramian, A.
407 see Abadeer, W. W.

Baniecki, J. D.
367 see Kotecki, D. E.

Barkley, K. G.
681 see Averill, R. M., III

Bartells, J., Jr.
621 see Katopis, G. A.

Bearda, T.
339 see Heyns, M. M.

Becker, W. D.
621 see Katopis, G. A.

Blake, M. A.
661 see Turgeon, P. R.

Bolam, R. J.
393 see Hook, T. B.

Bond, P. W.
829 see Hoke, J. M.

Böröczky, L., A. Y. Ngai, and E. F. Westermann
511 *Statistical multiplexing using MPEG-2 video encoders*

Bowen, M. A.
681 see Averill, R. M., III

Brown, J. J.
39 see Armacost, M.

Brush, D. G.
723 see Abbott, P. H.

Buchanan, D. A.
245 *Scaling the gate dielectric: Materials, integration, and reliability*

Buchanan, D. A.
327 see Lo, S.-H.

Buechner, T., R. Fritz, P. Guenther, M. Helms, K. D. Lamb, M. Loew, T. Schlipf, and M. H. Walz
889 *Event monitoring in highly complex hardware systems*

Buhrman, R. A.
287 see Ellis, K. A.

Burnham, J. S.
393 see Hook, T. B.

Cabral, C., Jr.
367 see Kotecki, D. E.

Campbell, S. A., H.-S. Kim, D. C. Gilmer, B. He, T. Ma, and W. L. Gladfelter
383 *Titanium dioxide (TiO_2)-based gate insulators*

Camporese, P. J.
681 see Averill, R. M., III

Check, M. A., and T. J. Slegel
671 *Custom S/390 G5 and G6 microprocessors*

Chencinski, E. W.
761 see Easter, R. J.

Clark, C. W., III
723 see Abbott, P. H.

Conkle, D. W.
407 see Abadeer, W. W.

Conti, R. A.
5 see Cote, D. R.

Cornelissen, I.
339 see Heyns, M. M.

Cote, D. R., S. V. Nguyen, A. K. Stamper, D. S. Armbrust, D. Többen, R. A. Conti, and G. Y. Lee
5 *Plasma-assisted chemical vapor deposition of dielectric thin films for ULSI semiconductor circuits*

Crone, C. J.
723 see Abbott, P. H.

D'Avignon, E. J.
761 see Easter, R. J.

Dansky, A. H.
681 see Averill, R. M., III

De Gendt, S.
339 see Heyns, M. M.

DeCusatis, C. M., D. J. Stigliani, Jr., W. L. Mostowy, M. E. Lewis, D. B. Petersen, and N. R. Dhondy
807 *Fiber optic interconnects for the IBM S/390 Parallel Enterprise Server G5*

Degraeve, R.
339 see Heyns, M. M.

Dhondy, N. R.
807 see DeCusatis, C. M.

Doemling, M. F.
181 see Oehrlein, G. S.

Duncombe, P. R.
367 see Kotecki, D. E.

Easter, R. J., E. W. Chencinski, E. J. D'Avignon, S. R. Greenspan, W. A. Merz, and C. D. Norberg
761 *S/390 Parallel Enterprise Server CMOS Cryptographic Coprocessor*

Ehrman, J. R.
723 see Abbott, P. H.

Ellis, K. A., and R. A. Buhrman
287 *Nitrous oxide (N_2O) processing for silicon oxynitride gate dielectrics*

Errickson, R. K.
795 see Gregg, T. A.

Ewart, G. W.
723 see Abbott, P. H.

Fair, M. L.
875 see Mueller, M.

Fee, M. F.
661 see Turgeon, P. R.

Fischer, W.
875 see Mueller, M.

Fonash, S. J.
103 *Plasma processing damage in etching and deposition*

Ford, C. B., III
661 see Turgeon, P. R.

Foster, E. M.
521 see Anderson, R. E.

Frankel, J. L.
621 see Katopis, G. A.

Fritz, R.
889 see Buechner, T.

Garfunkel, E. L.
265 see Gusev, E. P.

Gilbert, T. E.
915 see Van Huben, G. A.

Gilmer, D. C.
383 see Campbell, S. A.

Gladfelter, W. L.
383 see Campbell, S. A.

Gonzales, C. A., H. Yeo, and C. J. Kuo
453 *Requirements for motion-estimation search range in MPEG-2 coded video*

Gonzales, C. A.
489 see Mohsenian, N.

Gonzales, C. A.
471 see Westerink, P. H.

Goodrich, C. A.
723 see Abbott, P. H.

Green, M. L.
265 see Gusev, E. P.

Greenspan, S. R.
761 see Easter, R. J.

Gregg, T. A., K. M. Pandey, and R. K. Errickson
795 *The Integrated Cluster Bus for the IBM S/390 Parallel Sysplex*

Gregg, T. A.
863 see Spainhower, L.

Griffin, C. W.
407 see Abadeer, W. W.

Grill, A.
147 *Plasma-deposited diamondlike carbon and related materials*

Groeseneken, G.
339 see Heyns, M. M.

Guenther, P.
889 see Buechner, T.

Gusev, E. P., H.-C. Lu, E. L. Garfunkel, T. Gustafsson, and M. L. Green
265 *Growth and characterization of ultrathin nitrided silicon oxide films*

Gustafsson, T.
265 see Gusev, E. P.

Gutmann, A.
39 see Armacost, M.

Gutsche, M.
39 see Armacost, M.

Gutsche, M.
367 see Kotecki, D. E.

Hack, M.
723 see Abbott, P. H.

Halle, S. D.
39 see Armacost, M.

Hamaguchi, S.
199 *Modeling and simulation methods for plasma processing*

Hatch, R. F.
681 see Averill, R. M., III

He, B.
383 see Campbell, S. A.

Heim, G. J.
579 see Hilgendorf, R. B.

Helms, M.
889 see Buechner, T.

Hess, D. W.
127 *Plasma-assisted oxidation, anodization, and nitridation of silicon*

Heyns, M. M., T. Bearda, I. Cornelissen, S. De Gendt, R. Degraeve, G. Groeseneken, C. Kenens, D. M. Knotter, L. M. Loewenstein, P. W. Mertens, S. Mertens, M. Meuris, T. Nigam, M. Schaekers, I. Teerlinck, W. Vandervorst, R. Vos, and K. Wolke
339 *Cost-effective cleaning and high-quality thin gate oxides*

Hilgendorf, R. B., G. J. Heim, and W. Rosenstiel
579 *Evaluation of branch-prediction methods on traces from commercial applications*

Hinkel, G.
651 see Rizzolo, R. F.

Hoffman, D. E.
681 see Averill, R. M., III

Hoh, P. D.
39 see Armacost, M.

Hoke, J. M., P. W. Bond, T. Lo, F. S. Pidala, and G. Steinbrueck
829 *Self-timed interface for S/390 I/O subsystem interconnection*

Hook, T. B., J. S. Burnham, and R. J. Bolam
393 *Nitrided gate oxides for 3.3-V logic application: Reliability and device design considerations*

Hsiao, R.
89 *Fabrication of magnetic recording heads and dry etching of head materials*

Jackson, K. M., and K. N. Langston
847 *IBM S/390 storage hierarchy—G5 and G6 performance considerations*

Kapernick, J. S.
723 see Abbott, P. H.

Kaplita, G. A.
39 see Armacost, M.

Kastenmeier, B. E. E.
181 see Oehrlein, G. S.

Katopis, G. A., W. D. Becker, T. R. Mazzawy, H. H. Smith, C. K. Vakirtzis, S. A. Kuppinger, B. Singh, P. C. Lin, J. Bartells, Jr., G. V. Kihlmire, P. N. Venkatachalam, H. I. Stoller, and J. L. Frankel
621 *MCM technology and design for the S/390 G5 system*

Keller, J. H.
39 see Armacost, M.

Kenens, C.
339 see Heyns, M. M.

Kihlmire, G. V.
621 see Katopis, G. A.

Kim, H.-S.
383 see Campbell, S. A.

King, G. M.
855 see Rao, C. L.

Knebel, D. R.
899 see Song, P.

Knotter, D. M.
339 see Heyns, M. M.

Kotecki, D. E., J. D. Baniecki, H. Shen, R. B. Laibowitz, K. L. Saenger, J. J. Lian, T. M. Shaw, S. D. Athavale, C. Cabral, Jr., P. R. Duncombe, M. Gutsche, G. Kunkel, Y.-J. Park, Y.-Y. Wang, and R. Wise
367 *$(Ba,Sr)TiO_3$ dielectrics for future stacked-capacitor DRAM*

Krygowski, C. A.
707 see Schwarz, E. M.

Kunkel, G.
367 see Kotecki, D. E.

Kuo, C. J.
453 see Gonzales, C. A.

Kuo, Y., K. Okajima, and M. Takeichi
73 *Plasma processing in the fabrication of amorphous silicon thin-film-transistor arrays*

Kuppinger, S. A.
621 see Katopis, G. A.

Kusko, M. P.
899 see Song, P.

Laibowitz, R. B.
367 see Kotecki, D. E.

Lam, W.-M., and L. Lu
545 *Memory reduction for HDTV decoders*

Lamb, K. D.
889 see Buechner, T.

Langlois, E.
407 see Abadeer, W. W.

Langston, K. N.
847 see Jackson, K. M.

Lee, G. Y.
5 see Cote, D. R.

Lewis, M. E.
807 see DeCusatis, C. M.

Lian, J. J.
367 see Kotecki, D. E.

Lin, P. C.
621 see Katopis, G. A.

Lloyd, B. F.
407 see Abadeer, W. W.

Lo, S.-H., D. A. Buchanan, and Y. Taur
327 *Modeling and characterization of quantization, polysilicon depletion, and direct tunneling effects in MOSFETs with ultrathin oxides*

Lo, T.
829 see Hoke, J. M.

Loew, M.
889 see Buechner, T.

Loewenstein, L. M.
339 see Heyns, M. M.

Lu, H.-C.
265 see Gusev, E. P.

Lu, L.
545 see Lam, W.-M.

Lucovsky, G.
301 *Ultrathin nitrided gate dielectrics: Plasma processing, chemical characterization, performance, and reliability*

Ma, T.
383 see Campbell, S. A.

Mak, P.
661 see Turgeon, P. R.

Mallette, R. P.
407 see Abadeer, W. W.

Manohar, N. R., A. Mehra, M. H. Willebeek-LeMair, and M. Naghshineh
555 *A framework for programmable overlay multimedia networks*

Massucco, J. E.
407 see Abadeer, W. W.

Matsuo, P. J.
181 see Oehrlein, G. S.

Mayo, M. D.
681 see Averill, R. M., III

Mazzawy, T. R.
621 see Katopis, G. A.

McCabe, S. A.
681 see Averill, R. M., III

McKenna, J. M.
407 see Abadeer, W. W.

McNamara, T. G.
681 see Averill, R. M., III

McNamara, T. G.
915 see Van Huben, G. A.

McPherson, T. J.
681 see Averill, R. M., III

McPherson, T. J.
651 see Rizzolo, R. F.

Meaney, P. J.
661 see Turgeon, P. R.

Mehra, A.
555 see Manohar, N. R.

Mertens, P. W.
339 see Heyns, M. M.

Mertens, S.
339 see Heyns, M. M.

Merz, W. A.
761 see Easter, R. J.

Meuris, M.
339 see Heyns, M. M.

Michnowski, S.
651 see Rizzolo, R. F.

Minchau, B. J.
723 see Abbott, P. H.

Mittl, S. W.
407 see Abadeer, W. W.

Modi, I.
875 see Mueller, M.

Mohsenian, N., R. Rajagopalan, and C. A. Gonzales
489 *Single-pass constant- and variable-bit-rate MPEG-2 video compression*

Mostowy, W. L.
807 see DeCusatis, C. M.

Motika, F.
899 see Song, P.

Mueller, M., L. C. Alves, W. Fischer, M. L. Fair, and I. Modi
875 *RAS strategy for IBM S/390 G5 and G6*

Muller, K. P.
39 see Armacost, M.

Naeem, M. D.
39 see Armacost, M.

Naghshineh, M.
555 see Manohar, N. R.

Ng, H. Y.
39 see Armacost, M.

Ngai, A. Y.
511 see Böröczky, L.

Nguyen, S. V.
109 *High-density plasma chemical vapor deposition of silicon-based dielectric films for integrated circuits*

Nguyen, S. V.
5 see Cote, D. R.

Nigam, T.
339 see Heyns, M. M.

Noel, P. H.
407 see Abadeer, W. W.

Norberg, C. D.
761 see Easter, R. J.

Northrop, G. A.
681 see Averill, R. M., III

Oehrlein, G. S., M. F. Doemling, B. E. E. Kastenmeier, P. J. Matsuo, N. R. Rueger, M. Schaepkens, and T. E. F. M. Standaert
181 *Surface science issues in plasma etching*

Okajima, K.
73 see Kuo, Y.

Okorn-Schmidt, H. F.
351 *Characterization of silicon surface preparation processes for advanced gate dielectrics*

Pandey, K. M.
795 see Gregg, T. A.

Park, Y.-J.
367 see Kotecki, D. E.

Petersen, D. B.
807 see DeCusatis, C. M.

Pidala, F. S.
829 see Hoke, J. M.

Rajagopalan, R.
489 see Mohsenian, N.

Rajagopalan, R.
471 see Westerink, P. H.

Rao, C. L., G. M. King, and B. A. Weiler
855 *Integrated Cluster Bus performance for the IBM S/390 Parallel Sysplex*

Reed, C. A., and D. J. Thygesen
533 *Pseudorandom verification and emulation of an MPEG-2 transport demultiplexor*

Rizzolo, R. F., G. Hinkel, S. Michnowski, T. J. McPherson, and A. J. Sutcliffe
651 *System performance management for the S/390 Parallel Enterprise Server G5*

Rizzolo, R. F.
899 see Song, P.

Rosenstiel, W.
579 see Hilgendorf, R. B.

Rossnagel, S. M.
163 *Sputter deposition for semiconductor manufacturing*

Rueger, N. R.
181 see Oehrlein, G. S.

Saenger, K. L.
367 see Kotecki, D. E.

Schaekers, M.
339 see Heyns, M. M.

Schaepkens, M.
181 see Oehrlein, G. S.

Schlipf, T.
889 see Buechner, T.

Schwarz, E. M., and C. A. Krygowski
707 *The S/390 G5 floating-point unit*

Seigler, R.
661 see Turgeon, P. R.

Shaw, T. M.
367 see Kotecki, D. E.

Shen, H.
367 see Kotecki, D. E.

Shen, W. W.
661 see Turgeon, P. R.

Shepard, W. C.
723 see Abbott, P. H.

Sigal, L.
681 see Averill, R. M., III

Singh, B.
621 see Katopis, G. A.

Slegel, T. J.
671 see Check, M. A.

Smith, H. H.
681 see Averill, R. M., III

Smith, H. H.
621 see Katopis, G. A.

Smith, R. M., Sr.
723 see Abbott, P. H.

Smith, R. M., Sr.
777 see Yeh, P. C.

Song, P., F. Motika, D. R. Knebel, R. F. Rizzolo, and M. P. Kusko
899 *S/390 G5 CMOS microprocessor diagnostics*

Spainhower, L., and T. A. Gregg
863 *IBM S/390 Parallel Enterprise Server G5 fault tolerance: A historical perspective*

Spuler, B.
39 see Armacost, M.

Srinivasan, S.
39 see Armacost, M.

Stamper, A. K.
5 see Cote, D. R.

Standaert, T. E. F. M.
181 see Oehrlein, G. S.

Steinbrueck, G.
829 see Hoke, J. M.

Stigliani, D. J., Jr.
807 see DeCusatis, C. M.

Stoller, H. I.
621 see Katopis, G. A.

Sutcliffe, A. J.
651 see Rizzolo, R. F.

Takeichi, M.
73 see Kuo, Y.

Tallman, R.
723 see Abbott, P. H.

Taur, Y.
327 see Lo, S.-H.

Teerlinck, I.
339 see Heyns, M. M.

Thygesen, D. J.
533 see Reed, C. A.

Többen, D.
5 see Cote, D. R.

Turgeon, P. R., P. Mak, M. A. Blake, M. F. Fee, C. B. Ford III, P. J. Meaney, R. Seigler, and W. W. Shen
661 *The S/390 G5/G6 binodal cache*

Vakirtzis, C. K.
621 see Katopis, G. A.

Van Huben, G. A., T. G. McNamara, and T. E. Gilbert
915 *PLL modeling and verification in a cycle-simulation environment*

Vandervorst, W.
339 see Heyns, M. M.

Venkatachalam, P. N.
621 see Katopis, G. A.

Vos, R.
339 see Heyns, M. M.

Walkowiak, S.
723 see Abbott, P. H.

Walz, M. H.
889 see Buechner, T.

Wang, Y.-Y.
367 see Kotecki, D. E.

Watanabe, A.
723 see Abbott, P. H.

Webber, D. A.
681 see Averill, R. M., III

Weiler, B. A.
855 see Rao, C. L.

Westerink, P. H., R. Rajagopalan, and C. A. Gonzales
471 *Two-pass MPEG-2 variable-bit-rate encoding*

Westermann, E. F.
511 see Böröczky, L.

White, W. R.
723 see Abbott, P. H.

Willebeek-LeMair, M. H.
555 see Manohar, N. R.

Williams, P. M.
681 see Averill, R. M., III

Wise, R.
39 see Armacost, M.

Wise, R.
367 see Kotecki, D. E.

Wolke, K.
339 see Heyns, M. M.

Yan, W.
39 see Armacost, M.

Yeh, P. C., and R. M. Smith, Sr.
777 *S/390 CMOS Cryptographic Coprocessor Architecture: Overview and design considerations*

Yeo, H.
453 see Gonzales, C. A.

Subject index for papers in Volume 43

Each index entry below is accompanied by an author's name and a page number; the author index contains the title of the paper and the names of coauthors, if any.

Subject	Author	Page
Algorithms		
Evaluation of branch-prediction methods on traces from commercial applications	Hilgendorf	579
Analytical models		
Pseudorandom verification and emulation of an MPEG-2 transport demultiplexor	Reed	533
Arithmetic and logical unit design		
Architecture and software support in IBM S/390 Parallel Enterprise Servers for IEEE Floating-Point arithmetic	Abbott	723
The S/390 G5 floating-point unit	Schwarz	707
Capacitance		
$(Ba,Sr)TiO_3$ dielectrics for future stacked-capacitor DRAM	Kotecki	367
Titanium dioxide (TiO_2)-based gate insulators	Campbell	383
Ultrathin nitrided gate dielectrics: Plasma processing, chemical characterization, performance, and reliability	Lucovsky	301
Channel subsystem architecture		
Fiber optic interconnects for the IBM S/390 Parallel Enterprise Server G5	DeCusatis	807
Integrated Cluster Bus performance for the IBM S/390 Parallel Sysplex	Rao	855
Self-timed interface for S/390 I/O subsystem interconnection	Hoke	829
The Integrated Cluster Bus for the IBM S/390 Parallel Sysplex	Gregg	795
Chemical vapor deposition		
High-density plasma chemical vapor deposition of silicon-based dielectric films for integrated circuits	Nguyen	109
Plasma-assisted chemical vapor deposition of dielectric thin films for ULSI semiconductor circuits	Cote	5
Plasma-deposited diamondlike carbon and related materials	Grill	147
Chemistry and chemical engineering		
Cost-effective cleaning and high-quality thin gate oxides	Heyns	339
Growth and characterization of ultrathin nitrided silicon oxide films	Gusev	265
Nitrous oxide (N_2O) processing for silicon oxynitride gate dielectrics	Ellis	287
Ultrathin nitrided gate dielectrics: Plasma processing, chemical characterization, performance, and reliability	Lucovsky	301
Circuit and device technology		
Key measurements of ultrathin gate dielectric reliability and in-line monitoring	Abadeer	407
Nitrided gate oxides for 3.3-V logic application: Reliability and device design considerations	Hook	393
CMOS		
Chip integration methodology for the IBM S/390 G5 and G6 custom microprocessors	Averill	681
Custom S/390 G5 and G6 microprocessors	Check	671
Key measurements of ultrathin gate dielectric reliability and in-line monitoring	Abadeer	407
MCM technology and design for the S/390 G5 system	Katopis	621
Nitrided gate oxides for 3.3-V logic application: Reliability and device design considerations	Hook	393
RAS strategy for IBM S/390 G5 and G6	Mueller	875
S/390 G5 CMOS microprocessor diagnostics	Song	899
Computer system availability		
Event monitoring in highly complex hardware systems	Buechner	889

RAS strategy for IBM S/390 G5 and G6 — Mueller 875

Contamination
Cost-effective cleaning and high-quality thin gate oxides — Heyns 339

Cryptography
S/390 CMOS Cryptographic Coprocessor Architecture: Overview and design considerations — Yeh 777
S/390 Parallel Enterprise Server CMOS Cryptographic Coprocessor — Easter 761

Data compression
Single-pass constant- and variable-bit-rate MPEG-2 video compression — Mohsenian 489

Data transmission
Design of an MPEG-2 transport demultiplexor core — Anderson 521
Pseudorandom verification and emulation of an MPEG-2 transport demultiplexor — Reed 533

Design verification
PLL modeling and verification in a cycle-simulation environment — Van Huben 915

Device design
Nitrided gate oxides for 3.3-V logic application: Reliability and device design considerations — Hook 393

Dielectrics
$(Ba,Sr)TiO_3$ dielectrics for future stacked-capacitor DRAM — Kotecki 367
Characterization of silicon surface preparation processes for advanced gate dielectrics — Okorn-Schmidt 351
Growth and characterization of ultrathin nitrided silicon oxide films — Gusev 265
High-density plasma chemical vapor deposition of silicon-based dielectric films for integrated circuits — Nguyen 109
Key measurements of ultrathin gate dielectric reliability and in-line monitoring — Abadeer 407
Nitrided gate oxides for 3.3-V logic application: Reliability and device design considerations — Hook 393
Nitrous oxide (N_2O) processing for silicon oxynitride gate dielectrics — Ellis 287
Plasma-assisted chemical vapor deposition of dielectric thin films for ULSI semiconductor circuits — Cote 5
Plasma-assisted oxidation, anodization, and nitridation of silicon — Hess 127
Scaling the gate dielectric: Materials, integration, and reliability — Buchanan 245
Titanium dioxide (TiO_2)-based gate insulators — Campbell 383
Ultrathin nitrided gate dielectrics: Plasma processing, chemical characterization, performance, and reliability — Lucovsky 301

Diffusion
Scaling the gate dielectric: Materials, integration, and reliability — Buchanan 245

Electrochemistry
Characterization of silicon surface preparation processes for advanced gate dielectrics — Okorn-Schmidt 351

ESCON architecture
Fiber optic interconnects for the IBM S/390 Parallel Enterprise Server G5 — DeCusatis 807

Etching
Characterization of silicon surface preparation processes for advanced gate dielectrics — Okorn-Schmidt 351
Fabrication of magnetic recording heads and dry etching of head materials — Hsiao 89
Plasma-etching processes for ULSI semiconductor circuits — Armacost 39
Plasma processing damage in etching and deposition — Fonash 103
Surface science issues in plasma etching — Oehrlein 181

Fabrication
Ultrathin nitrided gate dielectrics: Plasma processing, chemical characterization, performance, and reliability — Lucovsky 301

Fault tolerance
IBM S/390 Parallel Enterprise Server G5 fault tolerance: A historical perspective — Spainhower 863

Fiber optics
Fiber optic interconnects for the IBM S/390 Parallel Enterprise Server G5 — DeCusatis 807

Films
Titanium dioxide (TiO_2)-based gate insulators — Campbell 383

Films, oxide
$(Ba,Sr)TiO_3$ dielectrics for future stacked-capacitor DRAM — Kotecki 367

Films, semiconductor
Plasma processing in the fabrication of amorphous silicon thin-film-transistor arrays — Kuo 73

Films, thin
$(Ba,Sr)TiO_3$ dielectrics for future stacked-capacitor DRAM — Kotecki 367
Fabrication of magnetic recording heads and dry etching of head materials — Hsiao 89
Growth and characterization of ultrathin nitrided silicon oxide films — Gusev 265
Modeling and characterization of quantization, polysilicon depletion, and direct tunneling effects in MOSFETs with ultrathin oxides — Lo 327
Nitrided gate oxides for 3.3-V logic application: Reliability and device design considerations — Hook 393
Plasma-assisted chemical vapor deposition of dielectric thin films for ULSI semiconductor circuits — Cote 5
Plasma-deposited diamondlike carbon and related materials — Grill 147
Plasma-etching processes for ULSI semiconductor circuits — Armacost 39
Scaling the gate dielectric: Materials, integration, and reliability — Buchanan 245

Surface science issues in plasma etching — Oehrlein 181
Titanium dioxide (TiO_2)-based gate insulators — Campbell 383
Ultrathin nitrided gate dielectrics: Plasma processing, chemical characterization, performance, and reliability — Lucovsky 301

I/O devices, systems, and technology
Self-timed interface for S/390 I/O subsystem interconnection — Hoke 829

IBM System/390 Parallel Enterprise Server
Architecture and software support in IBM S/390 Parallel Enterprise Servers for IEEE Floating-Point arithmetic — Abbott 723
Chip integration methodology for the IBM S/390 G5 and G6 custom microprocessors — Averill 681
Custom S/390 G5 and G6 microprocessors — Check 671
Event monitoring in highly complex hardware systems — Buechner 889
Fiber optic interconnects for the IBM S/390 Parallel Enterprise Server G5 — DeCusatis 807
IBM S/390 Parallel Enterprise Server G5 fault tolerance: A historical perspective — Spainhower 863
IBM S/390 storage hierarchy—G5 and G6 performance considerations — Jackson 847
Integrated Cluster Bus performance for the IBM S/390 Parallel Sysplex — Rao 855
MCM technology and design for the S/390 G5 system — Katopis 621
PLL modeling and verification in a cycle-simulation environment — Van Huben 915
RAS strategy for IBM S/390 G5 and G6 — Mueller 875
S/390 CMOS Cryptographic Coprocessor Architecture: Overview and design considerations — Yeh 777
S/390 G5 CMOS microprocessor diagnostics — Song 899
S/390 Parallel Enterprise Server CMOS Cryptographic Coprocessor — Easter 761
Self-timed interface for S/390 I/O subsystem interconnection — Hoke 829
System performance management for the S/390 Parallel Enterprise Server G5 — Rizzolo 651
The Integrated Cluster Bus for the IBM S/390 Parallel Sysplex — Gregg 795
The S/390 G5 floating-point unit — Schwarz 707
The S/390 G5/G6 binodal cache — Turgeon 661

Image processing
A framework for programmable overlay multimedia networks — Manohar 555
Design of an MPEG-2 transport demultiplexor core — Anderson 521
Memory reduction for HDTV decoders — Lam 545
Pseudorandom verification and emulation of an MPEG-2 transport demultiplexor — Reed 533
Requirements for motion-estimation search range in MPEG-2 coded video — Gonzales 453
Single-pass constant- and variable-bit-rate MPEG-2 video compression — Mohsenian 489
Statistical multiplexing using MPEG-2 video encoders — Böröczky 511
Two-pass MPEG-2 variable-bit-rate encoding — Westerink 471

Imaging technology
Plasma processing in the fabrication of amorphous silicon thin-film-transistor arrays — Kuo 73

Inductance
Plasma processing damage in etching and deposition — Fonash 103

Insulators
$(Ba,Sr)TiO_3$ dielectrics for future stacked-capacitor DRAM — Kotecki 367
Titanium dioxide (TiO_2)-based gate insulators — Campbell 383

Interconnection technology
Fiber optic interconnects for the IBM S/390 Parallel Enterprise Server G5 — DeCusatis 807

Interfaces
Modeling and characterization of quantization, polysilicon depletion, and direct tunneling effects in MOSFETs with ultrathin oxides — Lo 327

Logic design and technology
Architecture and software support in IBM S/390 Parallel Enterprise Servers for IEEE Floating-Point arithmetic — Abbott 723
Evaluation of branch-prediction methods on traces from commercial applications — Hilgendorf 579
S/390 CMOS Cryptographic Coprocessor Architecture: Overview and design considerations — Yeh 777
S/390 Parallel Enterprise Server CMOS Cryptographic Coprocessor — Easter 761
The S/390 G5 floating-point unit — Schwarz 707

Machine computation and data analysis
Evaluation of branch-prediction methods on traces from commercial applications — Hilgendorf 579

Magnetic recording
Fabrication of magnetic recording heads and dry etching of head materials — Hsiao 89

Manufacturing
Key measurements of ultrathin gate dielectric reliability and in-line monitoring — Abadeer 407
Sputter deposition for semiconductor manufacturing — Rossnagel 163

Materials
Growth and characterization of ultrathin nitrided silicon oxide films — Gusev 265
Scaling the gate dielectric: Materials, integration, and reliability — Buchanan 245
Ultrathin nitrided gate dielectrics: Plasma processing, chemical characterization, performance, and reliability — Lucovsky 301

Materials technology
$(Ba,Sr)TiO_3$ dielectrics for future stacked-capacitor DRAM — Kotecki 367
Cost-effective cleaning and high-quality thin gate oxides — Heyns 339
Surface science issues in plasma etching — Oehrlein 181

Mathematical functions and techniques
Architecture and software support in IBM S/390 Parallel Enterprise Servers for IEEE Floating-Point arithmetic — Abbott 723

Measurement
Characterization of silicon surface preparation processes for advanced gate dielectrics — Okorn-Schmidt 351
Growth and characterization of ultrathin nitrided silicon oxide films — Gusev 265
Key measurements of ultrathin gate dielectric reliability and in-line monitoring — Abadeer 407
Titanium dioxide (TiO_2)-based gate insulators — Campbell 383
Ultrathin nitrided gate dielectrics: Plasma processing, chemical characterization, performance, and reliability — Lucovsky 301

Memory (computer) design and technology
$(Ba,Sr)TiO_3$ dielectrics for future stacked-capacitor DRAM — Kotecki 367

Memory, cache
The S/390 G5/G6 binodal cache — Turgeon 661

Memory, random-access
$(Ba,Sr)TiO_3$ dielectrics for future stacked-capacitor DRAM — Kotecki 367

Microelectronics
Chip integration methodology for the IBM S/390 G5 and G6 custom microprocessors — Averill 681
Custom S/390 G5 and G6 microprocessors — Check 671
MCM technology and design for the S/390 G5 system — Katopis 621
System performance management for the S/390 Parallel Enterprise Server G5 — Rizzolo 651

Microprocessor systems and applications
Chip integration methodology for the IBM S/390 G5 and G6 custom microprocessors — Averill 681
Custom S/390 G5 and G6 microprocessors — Check 671

Models and modeling
Modeling and characterization of quantization, polysilicon depletion, and direct tunneling effects in MOSFETs with ultrathin oxides — Lo 327
Modeling and simulation methods for plasma processing — Hamaguchi 199
PLL modeling and verification in a cycle-simulation environment — Van Huben 915

Multilayers
Titanium dioxide (TiO_2)-based gate insulators — Campbell 383
Ultrathin nitrided gate dielectrics: Plasma processing, chemical characterization, performance, and reliability — Lucovsky 301

Multimedia
A framework for programmable overlay multimedia networks — Manohar 555
Design of an MPEG-2 transport demultiplexor core — Anderson 521
Memory reduction for HDTV decoders — Lam 545
Pseudorandom verification and emulation of an MPEG-2 transport demultiplexor — Reed 533
Requirements for motion-estimation search range in MPEG-2 coded video — Gonzales 453
Single-pass constant- and variable-bit-rate MPEG-2 video compression — Mohsenian 489
Statistical multiplexing using MPEG-2 video encoders — Böröczky 511
Two-pass MPEG-2 variable-bit-rate encoding — Westerink 471

Multiplexing
Design of an MPEG-2 transport demultiplexor core — Anderson 521
Pseudorandom verification and emulation of an MPEG-2 transport demultiplexor — Reed 533
Statistical multiplexing using MPEG-2 video encoders — Böröczky 511

Nanoscale structures and devices
Growth and characterization of ultrathin nitrided silicon oxide films — Gusev 265

Nitridation
Growth and characterization of ultrathin nitrided silicon oxide films — Gusev 265
Nitrided gate oxides for 3.3-V logic application: Reliability and device design considerations — Hook 393
Nitrous oxide (N_2O) processing for silicon oxynitride gate dielectrics — Ellis 287
Scaling the gate dielectric: Materials, integration, and reliability — Buchanan 245
Ultrathin nitrided gate dielectrics: Plasma processing, chemical characterization, performance, and reliability — Lucovsky 301

Oxynitridation
Growth and characterization of ultrathin nitrided silicon oxide films — Gusev 265
Nitrided gate oxides for 3.3-V logic application: Reliability and device design considerations — Hook 393
Nitrous oxide (N_2O) processing for silicon oxynitride gate dielectrics — Ellis 287
Scaling the gate dielectric: Materials, integration, and reliability — Buchanan 245
Ultrathin nitrided gate dielectrics: Plasma processing, chemical characterization, performance, and reliability — Lucovsky 301

Oxynitride
Growth and characterization of ultrathin nitrided silicon oxide films — Gusev 265
Key measurements of ultrathin gate dielectric reliability and in-line monitoring — Abadeer 407

Nitrous oxide (N_2O) processing for silicon oxynitride gate dielectrics — Ellis 287
Scaling the gate dielectric: Materials, integration, and reliability — Buchanan 245
Ultrathin nitrided gate dielectrics: Plasma processing, chemical characterization, performance, and reliability — Lucovsky 301

Performance analysis
Evaluation of branch-prediction methods on traces from commercial applications — Hilgendorf 579
Event monitoring in highly complex hardware systems — Buechner 889
IBM S/390 storage hierarchy—G5 and G6 performance considerations — Jackson 847
Integrated Cluster Bus performance for the IBM S/390 Parallel Sysplex — Rao 855
S/390 G5 CMOS microprocessor diagnostics — Song 899

Photothermal processes
Nitrous oxide (N_2O) processing for silicon oxynitride gate dielectrics — Ellis 287

Physical chemistry
Characterization of silicon surface preparation processes for advanced gate dielectrics — Okorn-Schmidt 351
Cost-effective cleaning and high-quality thin gate oxides — Heyns 339

Physics, solid state
Modeling and characterization of quantization, polysilicon depletion, and direct tunneling effects in MOSFETs with ultrathin oxides — Lo 327

Plasma processing
Fabrication of magnetic recording heads and dry etching of head materials — Hsiao 89
High-density plasma chemical vapor deposition of silicon-based dielectric films for integrated circuits — Nguyen 109
Modeling and simulation methods for plasma processing — Hamaguchi 199
Plasma-assisted chemical vapor deposition of dielectric thin films for ULSI semiconductor circuits — Cote 5
Plasma-assisted oxidation, anodization, and nitridation of silicon — Hess 127
Plasma-deposited diamondlike carbon and related materials — Grill 147
Plasma-etching processes for ULSI semiconductor circuits — Armacost 39
Plasma processing damage in etching and deposition — Fonash 103
Plasma processing in the fabrication of amorphous silicon thin-film-transistor arrays — Kuo 73
Sputter deposition for semiconductor manufacturing — Rossnagel 163
Surface science issues in plasma etching — Oehrlein 181
Ultrathin nitrided gate dielectrics: Plasma processing, chemical characterization, performance, and reliability — Lucovsky 301

Process control and development
Cost-effective cleaning and high-quality thin gate oxides — Heyns 339

Quantum theory and effects
Modeling and characterization of quantization, polysilicon depletion, and direct tunneling effects in MOSFETs with ultrathin oxides — Lo 327

Reliability
Cost-effective cleaning and high-quality thin gate oxides — Heyns 339
Key measurements of ultrathin gate dielectric reliability and in-line monitoring — Abadeer 407
Nitrided gate oxides for 3.3-V logic application: Reliability and device design considerations — Hook 393
RAS strategy for IBM S/390 G5 and G6 — Mueller 875
Scaling the gate dielectric: Materials, integration, and reliability — Buchanan 245

Semiconductor technology
Cost-effective cleaning and high-quality thin gate oxides — Heyns 339
High-density plasma chemical vapor deposition of silicon-based dielectric films for integrated circuits — Nguyen 109
Modeling and simulation methods for plasma processing — Hamaguchi 199
Nitrided gate oxides for 3.3-V logic application: Reliability and device design considerations — Hook 393
Plasma-assisted chemical vapor deposition of dielectric thin films for ULSI semiconductor circuits — Cote 5
Plasma-assisted oxidation, anodization, and nitridation of silicon — Hess 127
Plasma-etching processes for ULSI semiconductor circuits — Armacost 39
Plasma processing damage in etching and deposition — Fonash 103
Sputter deposition for semiconductor manufacturing — Rossnagel 163

Signal processing
Design of an MPEG-2 transport demultiplexor core — Anderson 521
Pseudorandom verification and emulation of an MPEG-2 transport demultiplexor — Reed 533
Requirements for motion-estimation search range in MPEG-2 coded video — Gonzales 453
Single-pass constant- and variable-bit-rate MPEG-2 video compression — Mohsenian 489
Statistical multiplexing using MPEG-2 video encoders — Böröczky 511
Two-pass MPEG-2 variable-bit-rate encoding — Westerink 471

Silicon
Cost-effective cleaning and high-quality thin gate oxides — Heyns 339
Growth and characterization of ultrathin nitrided silicon oxide films — Gusev 265
Plasma-assisted oxidation, anodization, and nitridation of silicon — Hess 127

Plasma-etching processes for ULSI semiconductor circuits — Armacost 39
Scaling the gate dielectric: Materials, integration, and reliability — Buchanan 245

Silicon dioxide
Cost-effective cleaning and high-quality thin gate oxides — Heyns 339
Growth and characterization of ultrathin nitrided silicon oxide films — Gusev 265
Key measurements of ultrathin gate dielectric reliability and in-line monitoring — Abadeer 407
Modeling and characterization of quantization, polysilicon depletion, and direct tunneling effects in MOSFETs with ultrathin oxides — Lo 327
Nitrided gate oxides for 3.3-V logic application: Reliability and device design considerations — Hook 393
Scaling the gate dielectric: Materials, integration, and reliability — Buchanan 245
Ultrathin nitrided gate dielectrics: Plasma processing, chemical characterization, performance, and reliability — Lucovsky 301

Silicon nitride
Growth and characterization of ultrathin nitrided silicon oxide films — Gusev 265
Key measurements of ultrathin gate dielectric reliability and in-line monitoring — Abadeer 407
Nitrous oxide (N_2O) processing for silicon oxynitride gate dielectrics — Ellis 287
Scaling the gate dielectric: Materials, integration, and reliability — Buchanan 245
Ultrathin nitrided gate dielectrics: Plasma processing, chemical characterization, performance, and reliability — Lucovsky 301

Silicon oxidation
Characterization of silicon surface preparation processes for advanced gate dielectrics — Okorn-Schmidt 351
Growth and characterization of ultrathin nitrided silicon oxide films — Gusev 265
Scaling the gate dielectric: Materials, integration, and reliability — Buchanan 245
Ultrathin nitrided gate dielectrics: Plasma processing, chemical characterization, performance, and reliability — Lucovsky 301

Sputtering
Sputter deposition for semiconductor manufacturing — Rossnagel 163

Storage hierarchies
IBM S/390 storage hierarchy—G5 and G6 performance considerations — Jackson 847
The S/390 G5/G6 binodal cache — Turgeon 661

Surface effects
Characterization of silicon surface preparation processes for advanced gate dielectrics — Okorn-Schmidt 351
Modeling and simulation methods for plasma processing — Hamaguchi 199

Surface passivation
Characterization of silicon surface preparation processes for advanced gate dielectrics — Okorn-Schmidt 351
Growth and characterization of ultrathin nitrided silicon oxide films — Gusev 265
Scaling the gate dielectric: Materials, integration, and reliability — Buchanan 245
Titanium dioxide (TiO_2)-based gate insulators — Campbell 383
Ultrathin nitrided gate dielectrics: Plasma processing, chemical characterization, performance, and reliability — Lucovsky 301

Surface science
Cost-effective cleaning and high-quality thin gate oxides — Heyns 339

Testing
Key measurements of ultrathin gate dielectric reliability and in-line monitoring — Abadeer 407

Thickness measurement
Modeling and characterization of quantization, polysilicon depletion, and direct tunneling effects in MOSFETs with ultrathin oxides — Lo 327

Transistors
Modeling and characterization of quantization, polysilicon depletion, and direct tunneling effects in MOSFETs with ultrathin oxides — Lo 327
Scaling the gate dielectric: Materials, integration, and reliability — Buchanan 245
Titanium dioxide (TiO_2)-based gate insulators — Campbell 383

Transistors, thin film (TFTs)
Plasma processing in the fabrication of amorphous silicon thin-film-transistor arrays — Kuo 73

Tunneling
Modeling and characterization of quantization, polysilicon depletion, and direct tunneling effects in MOSFETs with ultrathin oxides — Lo 327

Video signals
A framework for programmable overlay multimedia networks — Manohar 555
Design of an MPEG-2 transport demultiplexor core — Anderson 521
Memory reduction for HDTV decoders — Lam 545
Pseudorandom verification and emulation of an MPEG-2 transport demultiplexor — Reed 533
Requirements for motion-estimation search range in MPEG-2 coded video — Gonzales 453
Single-pass constant- and variable-bit-rate MPEG-2 video compression — Mohsenian 489
Statistical multiplexing using MPEG-2 video encoders — Böröczky 511
Two-pass MPEG-2 variable-bit-rate encoding — Westerink 471

Wear
Plasma-deposited diamondlike carbon and related materials — Grill 147